AMENDMENTS TO THE CLAIMS

1-7. (Cancelled)

8. (Previously Presented) A semiconductor laser device including a semiconductor laser element having a ridge type cladding layer, on a semiconductor substrate, said semiconductor laser element comprising:

a resonator for performing laser oscillation due to injection of carriers, the resonator having different reflectivities at a front facet and a rear facet, the front facet and the rear facet being arranged on opposite sides of the resonator;

a stripe structure for injecting carriers into the resonator, extending in an axis direction of the resonator; and

an electrode disposed on an upper portion of the stripe structure,

wherein said electrode is divided into two or more parts so that plural electrode parts are arranged along the resonator axis direction,

wherein, among the plural electrode parts, a current is to be injected into an electrode part that is positioned in the vicinity of the front facet of the resonator from which laser light is emitted, so as to obtain a larger current density in an active layer of the electrode part as compared with a current density in an electrode part that is positioned in the vicinity of the rear facet of the resonator, and

wherein said stripe structure has a taper shape in which a stripe width at the front facet of the resonator from which laser light is emitted is larger than a stripe width at the rear facet.

9. (Previously Presented) A semiconductor laser device as defined in Claim 8, wherein a resonator length is L, the stripe width at the front facet is Wf, the stripe width at the rear facet is Wr, and a stripe width in a position at a distance x from the front facet is Wx, said stripe structure is formed so as to satisfy a relationship of $Wx=Wf-(Wf-Wr) \cdot x/L$.

10. (Previously Presented) A semiconductor laser device as defined in Claim 9, wherein said stripe structure is formed so as to have a planar shape in which a ratio of the stripe width at the front facet to the stripe width at the rear facet satisfies a relationship of

1<(stripe width at the front facet)/(stripe width at the rear facet)<2.

11. (Previously Presented) A semiconductor laser device including a semiconductor laser element having a ridge type cladding layer, on a semiconductor substrate, said semiconductor laser element comprising:

a resonator for performing laser oscillation due to injection of carriers, the resonator having different reflectivities at a front facet and a rear facet;

a stripe structure for injecting carriers into the resonator, extending in an axis direction of the resonator; and

an electrode disposed on an upper portion of the stripe structure,

wherein said electrode is divided into two or more parts so that plural electrode parts are arranged along the resonator axis direction,

wherein, among the plural electrode parts, a current is to be injected into an electrode part that is positioned in the vicinity of the front facet of the resonator from which laser light is emitted, so as to obtain a larger current density in an active layer of the electrode part as compared with a current density in an electrode part that is positioned in the vicinity of the rear facet of the resonator, and

wherein at least one electrode part among the plural electrode parts has a taper shape in which a width on a front facet side is different from a width on a rear facet side.

12. (Currently Amended) A semiconductor laser device as defined in Claim [[8]] 11, wherein an electrode part close to a front facet side among the plural electrode parts has a taper shape in which a width on the front facet side is different from a width on a rear facet side.

13. (Previously Presented) A semiconductor laser device including a semiconductor laser element having a ridge type cladding layer, on a semiconductor substrate, said semiconductor laser element comprising:

a resonator for performing laser oscillation due to injection of carriers, the resonator having different reflectivities at a front facet and a rear facet;

a stripe structure for injecting carriers into the resonator, extending in an axis direction of the resonator; and

an electrode disposed on an upper portion of the stripe structure,

wherein said electrode is divided into two or more parts so that plural electrode parts are arranged along the resonator axis direction,

wherein, among the plural electrode parts, a current is to be injected into an electrode part that is positioned in the vicinity of the front facet of the resonator from which laser light is emitted, so as to obtain a larger current density in an active layer of the electrode part as compared with a current density in an electrode part that is positioned in the vicinity of the rear facet of the resonator, and

wherein each of the plural electrode parts has a taper shape in which a width on a front facet side is different from a width on a rear facet side.

14. (Previously Presented) A semiconductor laser device including a semiconductor laser element having a ridge type cladding layer, on a semiconductor substrate, said semiconductor laser element comprising:

a resonator for performing laser oscillation due to injection of carriers, the resonator having different reflectivities at a front facet and a rear facet;

a stripe structure for injecting carriers into the resonator, extending in an axis direction of the resonator; and

an electrode disposed on an upper portion of the stripe structure,

wherein said electrode is divided into two or more parts so that plural electrode parts are arranged along the resonator axis direction,

wherein, among the plural electrode parts, a current is to be injected into an electrode part that is positioned in the vicinity of the front facet of the resonator from which laser light is emitted, so as to obtain a larger current density in an active layer of the electrode part as compared with a current density in an electrode part that is positioned in the vicinity of the rear facet of the resonator, and

wherein said stripe structure has a resistive layer formed on the upper portion thereof, and said resistive layer has a resistance value that varies from the front facet of the resonator at which laser light is emitted, to the rear facet.

15. (Previously Presented) A semiconductor laser device including a plurality of semiconductor laser elements each having a ridge type cladding layer, the plurality of semiconductor laser elements being integrated on a semiconductor substrate, each of said semiconductor laser elements comprising:

a resonator for performing laser oscillation due to injection of carriers, the resonator having different reflectivities at a front facet and a rear facet;

a stripe structure for injecting carriers into the resonator, extending in an axis direction of the resonator; and

an electrode disposed on an upper portion of the stripe structure,

wherein said electrode is divided into two or more parts so that plural electrode parts are arranged along the resonator axis direction,

wherein, among the plural electrode parts, a current is to be injected into an electrode part that is positioned in the vicinity of the front facet of the resonator from which laser light is emitted, so as to obtain a larger current density in an active layer of the electrode part as compared with a current density in an electrode part that is positioned in the vicinity of the rear facet of the resonator, and

wherein separation resistive parts for separating adjacent semiconductor laser elements are formed on the semiconductor substrate.

16. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein at least one of the semiconductor laser elements oscillates laser light with a wavelength that is different from those of others of the semiconductor laser elements.

17. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein at least one of the semiconductor laser elements is driven with an injection current that is different from those of others of the semiconductor laser elements.

18. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein the stripe structure of at least one of the semiconductor laser elements has a width that is different from widths of stripe structures of others of the semiconductor laser elements.

19. (Previously Presented) A semiconductor laser device as defined in Claim 8, wherein an oscillation wavelength of laser light emitted from the semiconductor laser element is 430～455nm.

20. (Previously Presented) A semiconductor laser device as defined in Claim 8, wherein said semiconductor laser element emits laser light whose vertical mode spectrum is in a multimode.

21. (Previously Presented) A semiconductor laser device as defined in Claim 8, wherein said semiconductor laser element emits laser light whose vertical mode spectrum width expands by 1nm or more.

22. (Previously Presented) A laser projector comprising:

a semiconductor laser device for emitting laser light; and

an optical system for projecting laser light emitted from the semiconductor laser device, said semiconductor laser device comprising the semiconductor laser device as defined in Claim 8.

23. (Previously Presented) A semiconductor laser device as defined in Claim 11, wherein an oscillation wavelength of laser light emitted from the semiconductor laser element is 430～455nm.

24. (Previously Presented) A semiconductor laser device as defined in Claim 11, wherein said semiconductor laser element emits laser light whose vertical mode spectrum is in a multimode.

25. (Previously Presented) A semiconductor laser device as defined in Claim 11, wherein said semiconductor laser element emits laser light whose vertical mode spectrum width expands by 1nm or more.

26. (Previously Presented) A laser projector comprising:

a semiconductor laser device for emitting laser light; and

an optical system for projecting laser light emitted from the semiconductor laser device, said semiconductor laser device comprising the semiconductor laser device as defined in Claim 11.

27. (Previously Presented) A semiconductor laser device as defined in Claim 13, wherein an oscillation wavelength of laser light emitted from the semiconductor laser element is 430～455nm.

28. (Previously Presented) A semiconductor laser device as defined in Claim 13, wherein said semiconductor laser element emits laser light whose vertical mode spectrum is in a multimode.

29. (Previously Presented) A semiconductor laser device as defined in Claim 13, wherein said semiconductor laser element emits laser light whose vertical mode spectrum width expands by 1nm or more.

30. (Previously Presented) A laser projector comprising:

a semiconductor laser device for emitting laser light; and

an optical system for projecting laser light emitted from the semiconductor laser device, said semiconductor laser device comprising the semiconductor laser device as defined in Claim 13.

31. (Previously Presented) A semiconductor laser device as defined in Claim 14, wherein an oscillation wavelength of laser light emitted from the semiconductor laser element is 430～455nm.

32. (Previously Presented) A semiconductor laser device as defined in Claim 14, wherein said semiconductor laser element emits laser light whose vertical mode spectrum is in a multimode.

33. (Previously Presented) A semiconductor laser device as defined in Claim 14, wherein said semiconductor laser element emits laser light whose vertical mode spectrum width expands by 1nm or more.

34. (Previously Presented) A laser projector comprising:

a semiconductor laser device for emitting laser light; and

an optical system for projecting laser light emitted from the semiconductor laser device, said semiconductor laser device comprising the semiconductor laser device as defined in Claim 14.

35. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein an oscillation wavelength of laser light emitted from each of the semiconductor laser elements is 430～455nm.

36. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein said semiconductor laser elements each emit laser light whose vertical mode spectrum is in a multimode.

37. (Previously Presented) A semiconductor laser device as defined in Claim 15, wherein said semiconductor laser elements emit laser light whose vertical mode spectrum width expands by 1nm or more.

38. (Previously Presented) A laser projector comprising:

a semiconductor laser device for emitting laser light; and

an optical system for projecting laser light emitted from the semiconductor laser device, said semiconductor laser device comprising the semiconductor laser device as defined in Claim 15.